

## ABSTRACT

Systems and methods for managing admission of requests to a streaming media server are provided. In certain embodiments, a method comprises receiving a new request for a streaming file to be served by a media server, and determining a cost to the media server for serving the requested streaming file, wherein the cost corresponds to the media server's resources to be consumed in serving the requested streaming file. The method further comprises determining, based at least in part on the cost, whether to admit the new request for service by the media server. In certain embodiments, a method comprises receiving, at a time  $T_{cur}$ , a new request for a streaming file to be served by a media server, and creating a segment-based model of the media server's memory as of time  $T_{cur}$ . And, based at least in part on the segment-based model of the media server's memory, determining whether to accept the received request for service by the media server.